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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/232,049	01/15/1999	MASAYUKI SATO	FUJA-15.799	2308

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EXAMINER
HUNT, ERIC T

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 11/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/232,049	Applicant(s) SATO ET AL.	
	Examiner Eric T. Hunt	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *29 August 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This office action is in response to the amendment filed on 08/29/2002 to U.S. Patent Application 09/232,049 originally filed on 01/15/1999.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claim 4 is rejected under 35 U.S.C. 102(a) as anticipated by Hisayoshi (JP0 6-303288).

3. Regarding claim 4, Hisayoshi teaches a system of racing control in systems management by CMIP operations defined by an OSI model for switching systems, provided with, an execution status table (operation registration table) storing information of operations now being executed (page 3 of 4, [0032]), and a rivalry table (racing control table) (page 3 of 4, [0032]) with information of whether or not operations may be executed. The rivalry table is in a form that requires cross-referencing (page 3 of 4, [0033-0034]; this suggests the table is in the form of a matrix, of operations under investigation (newly requested) and the CMIP operations in the execution status table (now being executed) (Page 3 of 4, [0033-0034]). Matrix is taken to mean an array of commands or input values and outputs. Hisayoshi further discloses an information analysis means (first means) for extracting commands from command groups (operations) from the execution status table, a means (second means) for investigating (determining) whether or not the MOI of operations being executed and operations being requested are the same, and a command delivery means (third means) for determining whether the requested operations can be

executed by referring to the rivalry table (page 3 of 4, [0033-0034]). All of Hisayoshi's elements are equivalent to those claimed. Thus, it is clear that Hisayoshi reads on the claimed invention.

Claim Rejections - 35 U.SC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1,8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisayoshi (J-PO No. 6-303288) and Moeller (U.S. Pat. No. 5,519,867)

6. Regarding Claim 1, Hisayoshi teaches a method of racing control in system management including the steps of determining, regarding CMIP commands (operations), whether or not managed object instances (MOI) of operations are the same. Hisayoshi performs racing control while treating commands as command groups. Hisayoshi teaches a rivalry table (racing control table) to determine whether it is possible to execute newly requested operations. Hisayoshi does not teach the use of a managed object instances in units of the smallest instance (i.e. units of processing) to carry out racing decisions. In related art object instances are implemented in units of varying degree. Moeller teaches the object-oriented access to services provided by an operating system. Moeller defines an object is an instance of some class. This art teaches that a subclass is from another class and that inheritance is the mechanism by which subclasses are created for greater levels of specialization (column 2, lines 30-33). Moeller defines classes that access services of an operating system including, thread classes, synchronization classes, inter process communication classes and virtual memory classes (column 3, lines 59-67 and column 4,

lines 1-22). Thus, According to Moeller, subclasses can be created from these parent classes resulting in more specialized and subsequently smaller units of instances of each class. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the managed objects taught by Hisayoshi in view of Moeller and define objects as units of even the smallest instance, in order to optimize race control for an increased number of instances.

7. Regarding claim 8, Hisayoshi teaches a correspondence table with command ID and corresponding MOI (page 3 of 4, [0034]). Hisayoshi also teaches a containment tree that shows the hierarchy of actual resource matched with MOI (page 1 of 4, [0013]). The correlation found between the correspondence table (command ID) and containment tree (MOI of resources) anticipate a racing control unit structured based on the identity of expressions (instances) of resources to be controlled. Hisayoshi bases an equivalent system set forth in claim 5 on commands and command groups, whereby the command IDs stored in the correspondence table were the IDs of commands and command groups. Hisayoshi's commands and command groups correlate with groups of MOI of resources to be controlled from the containment tree.

Therefore, the combination of Hisayoshi's teachings regarding this claim and Moeller's teachings of more specialized, smaller instances of objects renders obvious a racing unit structured based on the identity or the resemblance of categories of resources to be controlled. Hisayoshi further teaches referencing a rivalry table Hisayoshi's rivalry table is based on commands (classification of control) and command groups (groups of classification of control). This element of he claim is anticipated because the applicant shows the classification of control as groupings of commands or verbs in figures 5A & 5B. Therefore, it would have been obvious

to one ordinary skill in the art at the time the invention was made to modify Hisayoshi in view of Moeller to structure a racing control unit to determine whether or not newly requested operations may be executed, based on the identity of expressions of resources to be controlled. It is obvious because by reduction of overhead gained by solely referencing the identity and not all elements of an instance would improve efficiency.

8. Claims 2-3, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hisayoshi (JPO No. 6-303288) and Moeller (U.S. Pat. No. 5,519,867) in view of what was well known in the art.

9. Regarding claims 2-3, Hisayoshi also teaches a containment tree of MOI (external expressions) that establishes correspondence between MOI of operations and their actual resources [0013]. Hisayoshi invention discloses management comprising CMIP commands and environmental application section operations both OSI and non-OSI. [0001]. This is taken to mean that Hisayoshi addresses newly requested operations under CMIP and operations inherent to the system. Hisayoshi does not teach the use of external expressions in units of smallest instance (i.e. units of processing). The applicant defines external expression to be equivalent with object instance (page 18, line 36). Hisayoshi does not teach determining the possibility of execution of operation on a common racing table formed based on combinations of classification of control of operations inherent to the system. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hisayoshi to base the common racing control table on the classification of control of operation inherent to the system.

The examiner takes OFFICIAL NOTICE that as a system encounters inputs with multiple classifications of operations, distinct decision or truth tables, consisting of narrowly defined

associative sets of variables, may be referenced in order improve system efficiency and determine an appropriate output. Thus, it would have been obvious to one having ordinary skill that the combination of Hisayoshi and Moeller implemented in accordance with standard programming practices would result in claims 2-3 since decision and truth tables are routinely utilized to make efficient output determinations.

10. Regarding Claim 5, Hisayoshi discloses an execution status table as noted above. Hisayoshi also teaches a rivalry table and correspondence table (common racing control table) establishing correspondence between CMIP commands and OSI and non-OSI operations (page 3 of 4, [0031]). As noted above Hisayoshi teaches the means of extracting operations now being executed (first means), determining if the operations now being executed and newly requested are the same (second means), and a contention control/command delivery means for determining whether the newly requested operation may be executed by referring a rivalry table (common racing control table) (third means) (page 3 of 4, [0043-0044]).

However Hisayoshi is silent as to the teachings of MOI (external expression) of the smallest instance corresponding to the MOI of newly requested operations. These additional elements would be further obvious from the teachings on Hisayoshi's correspondence and rivalry table and Moeller's teachings of more specialized, smaller instances of objects. Thus, the combination of Hisayoshi and Moeller would have been obvious to one of ordinary skill in the art as noted above regarding claims 2-3.

11. Regarding claims 6-7, as noted above Hisayoshi teaches a rivalry table and correspondence table (common racing control table) that establish correspondence of groups of CMIP operations and OSI and non-OSI operations. Hisayoshi does not teach storing information

of whether newly requested operations may be executed in the form of combinations of classification of operations now being executed and classifications of newly requested operations. However, the OFFICIAL NOTICE taken regarding claims 2-3, renders obvious the use of classifications of operations as now being executed, newly requested, or classification of control of newly requested operations as variables in such a table. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hisayoshi to form a rivalry and correspondence table (common racing control table) that stores information of whether newly requested operations may be executed in the form of combinations of the classification of operation now being executed and classifications of newly requested operations. Because discriminating and referencing only the pertinent associative sets of input variables in a table further increases the efficiency of making output determinations.

Response to Arguments

12. In substance the applicant argued:

(A) The prior art neither discloses nor suggests that the racing control is performed between CMIP operations in units of instance.

(B) The prior art does not describe an instance relating to an instance of some class.

(C) The prior art is not directly related to the switching system as described by the present invention.

In response to applicant's argument (A), Hisayoshi teaches extracting commands from command groups **(Hisayoshi page 3 of 4, [0033-0034])** corresponding to operations & investigating whether or not the managed object instance (MOI) of operations being executed

and operations being requested are the same corresponding to racing control in units of instance **(Hisayoshi page 3 of 4, [0033-0034])**

In response to applicant's argument (B), Moeller explicitly discloses in object-oriented technology that each object is an instance of some class **[Moeller column 2, lines 19-22].** Moreover, Given the broadest reasonable interpretation of the term managed object instance, Hisayoshi teaches an object as an instance. Thus, the teachings of Moeller and Hisayoshi as relied upon in the combination teach each object is an instance.

In response to applicant's argument (C) that Moeller is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Applicant acknowledges the prior art's relationship to object oriented multitasking systems. Moeller further discloses **[Moeller column 2, lines 19-22 & 30-33]**. This is held to be reasonably pertinent to the particular problem of performing racing control in a system, in units of the smallest instance.

13. Applicant's arguments filed on 08/29/02 have been fully considered but they are not persuasive.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric T. Hunt whose telephone number is 703-305-4868. The examiner can normally be reached on 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

E.H.
November 12, 2002

MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100